REMARKS/ARGUMENTS

Reconsideration of this application is politely requested. Claims 1-8 remain active in the case. In order to more particularly point out and distinct claim that which the applicants regard as their invention, claims 1 and 5 have been amended. No new matter is introduced.

1. Rejections over claims 1-4:

Claim 1 was rejected under 35 U.S.C. 102(e), for reasons of record that can be found on pages 2-4 in the Office action identified above, which is Part of Paper No./Mail Date 20051112. Claim 1 was rejected because of Ngo et al. (US 6818557).

Ngo et al. teaches a method of forming SiC capped copper interconnects with reduced hillock formation and improved electromigration resistance. The method includes treating the exposed planarized surface of in-laid Cu with a plasma containing NH_3 and N_2, ramping up the introduction of trimethylsilane and then initiating deposition of a silicon carbide capping layer.

Ngo teaches that *after the soft NH_3 plasma treatment, the power is turned off* (col. 5, lines 49-62; col. 6, lines 11-15). *After 5 to 7 seconds, TMS is gradually introduced into the chamber.* The TMS flow rate is ramped up to a suitable deposition flow rate, as in a plurality of stages. *After the TMS has achieved a suitable flow rate, the RF power is again turned on*, thereby generating a plasma and *depositing a capping layer of silicon carbide on the Cu surface*. According to Ngo, the purpose of turning on the RF power is to deposit a silicon carbide capping layer on the copper surface, rather than making the TMS react with the copper surface in advance. The TMS will be adsorbed to the wafer surface, and will barely react with the copper surface even the RF power is then turned on.

The applicants submit that Ngo teaches away from that "reacting said treated surface of said copper or copper alloy under plasma enhanced chemical vapor deposition

(PECVD) conditions comprising simultaneously supplying trimethylsilane or tertramethylsilane and initiating plasma to make said trimethylsilane or tertramethylsilane react with said treated surface of said copper or copper alloy", as required by the amended claim 1.

It is respectfully suggested that, in light of the above, none of the cited references, alone or in combination, teaches or makes obvious all of the limitations of the amended claim 1. Allowance of claim 1 is therefore politely requested. As claims 2-4 are dependent upon claim 1, they should be allowable if claim 1 is allowed. Reconsideration of claims 2-4 is therefore politely requested.

2. Rejections over claims 5-8:

Claim 5 was rejected under 35 U.S.C. 103(a), for reasons of record that can be found on pages 4-8 in the Office action identified above, which is Part of Paper No./Mail Date 20051112.

Ngo teaches that *after the soft NH_3 plasma treatment, the power is turned off* (col. 5, lines 49-62; col. 6, lines 11-15). *After 5 to 7 seconds, TMS is gradually introduced into the chamber.* The TMS flow rate is ramped up to a suitable deposition flow rate, as in a plurality of stages. *After the TMS has achieved a suitable flow rate, the RF power is again turned on*, thereby generating a plasma and *depositing a capping layer of silicon carbide on the Cu surface*. According to Ngo, the purpose of turning on the RF power is to deposit a silicon carbide capping layer on the copper surface, rather than making the TMS react with the copper surface in advance. The TMS will be adsorbed to the wafer surface, and will barely react with the copper surface even the RF power is then turned on.

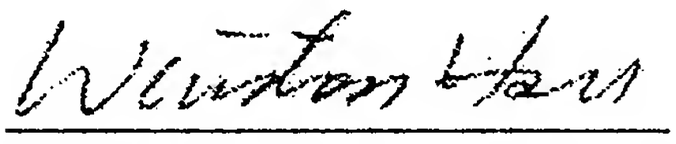
The applicants submit that Ngo teaches away from that "reacting said treated surface of said copper or copper alloy under plasma enhanced chemical vapor deposition (PECVD) conditions comprising simultaneously supplying trimethylsilane or tertramethylsilane and initiating plasma to make said trimethylsilane or tertramethylsilane react with said treated surface of said copper or copper alloy", as required by the amended

claim 5.

It is respectfully suggested that, in light of the above, none of the cited references, alone or in combination, teaches or makes obvious all of the limitations of the amended claim 5. Allowance of claim 5 is therefore politely requested. As claims 6-8 are dependent upon claim 5, they should be allowable if claim 5 is allowed. Reconsideration of claims 6-8 is therefore politely requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Sincerely yours,



Date: 02.14.2006

Winston Hsu, Patent Agent No. 41,526
P.O. BOX 506, Merrifield, VA 22116, U.S.A.
Voice Mail: 302-729-1562
Facsimile: 806-498-6673
e-mail : winstonhsu@naipo.com

Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)